NISHOK NARASIMHA MOHANASAMY

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SUMMARY

Experienced Full Stack Senior software developer in developing sophisticated end to end scalable distributed systems. Architected and developed Network operating system for Distributed/Cloud native Software Defined Networks. Currently designing and developing Path computation engine for complicated and disaggregated layered Optical networks.

SKILLS

Programming languages	JAVA, JavaScript, HTML5, CSS3, Python, Groovy, php
Automation	Selenium, Web driver, Junit
Continuous Integration	Git, GitLab, Jenkins, JIRA, Crucible, ANT, Maven, Buck, Gradle
Databases	Neo4j, MongoDB, CouchDB, MySql, MSSql Server
Operating System	Windows, Linux (Ubuntu), OS X
BOP – Process Platform	CWS, XForms, WsApps, WorFlow, WSDL, REST
Application Servers	Django, Node.js, Tomcat, KARAF (OSGI)
Frameworks	Angular2, MEAN, Jquery, BackBoneJS, Underscore, MooTools, Bootstrap
Clients	PyCharm, InteliJ, Eclipse, WebStorm, Android Studio, SubLime

EXPERIENCE

Full Stack Senior Software Developer/Research Scientist 2, *Bell Labs, Nokia, Kanata, Ottawa & Minneapolis, MN* **[Nov 2019 – present]**

- Designing and developing End to End Path computation engine for complicated and disaggregated layered Optical networks. This engine not only implements advanced graph data structures and algorithms such as suurballe, bhandari but also constructs scalable optimized Topology graph for millions of network elements.
- Architecting and developing Health and Analytics Streaming system for proactive service failure detection. The health data from IP/Optical devices will be in the order of 100s of thousands per second. Designed and developed Kafka based streaming analytics for data monitoring and collection. This distributed highly scalable architecture was developed using Reactor Java, Kafka Queues and Streaming framework, gNMI (gRPC Network Management Interface) and Angular elements.
- Team lead of 4 engineers for Lab infrastructure development Team, architecting and managing several clusters of cloud infrastructure such as VMware cloud, Openstack (CBIS, NCIR), Kubernetes (NCM, BCMT) etc. The Lab dashboard was developed using Angular.js, vanilla javascript and Node.js

Full Stack Senior Software Developer/Research Scientist, *Bell Labs, Nokia, MH, New Jersey* **[June 2016 – Nov 2019]**

- Principal architect and Senior developer for NetUNIX Network Operating system, Distributed/Cloud native Software Defined Networks for network elements across all layers such as IP, Optics, WIFI, LTE and other mobile networks.
- Architected and developed distributed Network Resource Manager for SDN network optimization using constraints such as Bandwidth, Latency etc. Developed scalable distributed Network Slicing service across IP, optical layers which supports IP-Prefixing and VLAN. The slicing framework was developed using Angular.js, Node.js and Java.
- Designed and developed Distributed Element Management System for controlling the multi-domain multi-layer network elements in NetUNIX Operating system.

Graduate Assistant, *Montclair State University, New Jersey* **[Sept 2015 – June 2016]**

- Research assistant for Machine Learning in Censorship predictions.
- Designed and developed a machine learning application predicting the closest alternatives that are less likely to be censored by the Baidu search engine.
- Designed and developed a real-time parking application, providing real-time navigation to the closest parking space available.
- Architected and developed an Android application for donation where the donors can monitor the progress of the donations.

Senior Software Engineer, *OpenText Corp., India* **[Jan 2014 – Aug 2015]**

- Worked as Team lead, scrum master and front-end engineer, not only developing user interfaces and implementing back-end java scripting but also managed the different teams for several sprints and achieved quality assurance through continuous integration.
- Designed and developed a Tree-Grid Library which display all related tabular data in Tree format.
- Designed and implemented Pathfinder code coverage tool for identifying test cases impacted by front end Javascript framework modifications.

Software Engineer, *Cordys R&D, India* **[Jul 2009 – Dec 2013]**

- Worked as Software Engineer in Cordys R&D for 4 years, developing various Business process management's inbox features.
- Developed Selenium framework for Cordys BOP platform, running on multi browser, multi-platform using developer ideal time resources.

EDUCATION

Master of Science in Computer Science **GPA: 3.94/4** **[Sept 2015 – Dec 2016]**
Montclair State University, New Jersey
Major: Computer Science
Course Work: Algorithms and Analysis, Web development, Computer Architecture, Machine Learning, Software Engineering and Mobile Computing.

Bachelor of Engineering in Computer Science **GPA: 3.74/4** **[Aug 2005 – May 2009]**
Anna University, India
Course Work: Data Structures I & II, Database Systems, OOPS, Networking, Web Services, Artificial Intelligence and Image Processing.

PAPERS

[1] N. Mohanasamy ,M. Thottan, C. Di Martino, Y-J. Kim, G. Atkinson, N. Choi, L. Jagadeesan, V. Mendiratta, J. Simsarian, and B. Kozicki, The Network OS: Carrier-grade SDN control of multi-domain, multi-layer networks in Bell Labs Technical Journal, vol. 21, pp.1-29, 2017.
[2] Nishok Narasimha-Mohanasamy, John Jenq, An Intelligent Parking Assistant, Proceedings of The 20th World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 201